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November 21, 2003

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APPLICATION NUMBER: 60/412,530

FILING DATE: September 20, 2002

RELATED PCT APPLICATION NUMBER: PCT/US03/29939

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9-23-02

60/412530 .092002 A/pe

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Jc921 U.S. PRO

PROVISIONAL APPLICATION COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION under 37 C.F.R. 1.53 (b)(2).

Docket Number		1299US		Type a plus sign (+) inside this box →	X
INVENTOR(S)/APPLICANT(S)					
Last Name	First Name	MI	Residence (City and either State or Foreign Country)		
Koch	D.	Christian	Maple Grove, Minnesota		
Wilson	Blade	R.	Maple Grove, Minnesota		
King	Mark	A.	Blaine, Minnesota		
Neese	Thomas	C.	Plymouth, Minnesota		
TITLE OF THE INVENTION					
Self Contained Lubricant Dispenser					
CORRESPONDENCE ADDRESS					
Graco Minnesota Inc. P. O. Box 1441 Minneapolis					
STATE	Minnesota	ZIPCODE	55440-1441	COUNTRY	U.S.A.
ENCLOSED APPLICATION PARTS (check all that apply)					
<input checked="" type="checkbox"/>	Specification	Number of Pages	5	<input type="checkbox"/>	Small Entity Statement
<input checked="" type="checkbox"/>	Drawing(s)	Number of Sheets	1	<input type="checkbox"/>	Other (specify)
METHOD OF PAYMENT (check one)					
<input type="checkbox"/>	A check or money order is enclosed to cover the Provisional filing fees			Provisional Filing Fee Amount (\$)	\$160.00
<input checked="" type="checkbox"/>	The Commissioner is hereby authorized to charge filing fees and credit Deposit Account Number: 07-1775				

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

☒ No.

☐ Yes, the name of the U. S. Government agency and the Government contract number are:

Respectfully submitted,

Douglas B. Farrow

Date: September 20, 2002

Reg. No.: 28582

☐ Additional inventors are being named on separately numbered sheets attached hereto.

"Express Mail" Certificate

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37CFR 1.10 on the date indicated below and is addressed to Box Provisional Patent Application, Asst Commissioner for Patents, Washington, DC 20231. Mailing Label EL680890287US

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September 20, 2002
Date

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for FY 2000**Patent fees are subject to annual revision.
Small Entity payments must be supported by a small entity statement,
otherwise large entity fees must be paid. See Forms PTO/SB/09-12
See 37 C.F.R. §§ 1.27 and 1.28*Complete if Known***TOTAL AMOUNT OF PAYMENT** \$ 160.00

Application Number	
Filing Date	
First Named Inventor	Koch
Group Art Unit	
Examiner Name	
Attorney Docket Number	1299US

METHOD OF PAYMENT (check one)

- 1.
- ☒
- The Commissioner is hereby authorized to charge indicated fees and credit any over payments to

Deposit Account
Number 07-1775Deposit Account
Name☒ Charge any additional fee required under 37
CFR 1.16 or 1.17

- 2.
- ☐
- Payment Enclosed
-
- ☐
- Check
- ☐
- Money Order
- ☐
- Other

FEE CALCULATION (fees effective 10/01/01)**1. BASIC FILING FEE**
Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	FEE DESCRIPTION	FEE PAID
101	740	201	370	Utility filing fee	
106	330	206	165	Design filing fee	
107	510	207	255	Plant filing fee	
108	740	208	370	Reissue filing fee	
114	160	214	80	Provisional filing fee	\$160.00
SUBTOTAL (1)					\$ 160.00

2. EXTRA CLAIM FEES

Total Claims	Extra	Fee from below	Fee Paid
Independent Claims	-20** =	X	=
Multiple Dependent Claims	-3** =	X	=

**or number previously paid, if greater; For Reissues, see below

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description
103	18	203	09	Claims in excess of 20
102	84	202	42	Independent claims in excess of 3
104	280	204	140	Multiple dependent claims, if not paid
109	84	209	42	**Reissue independent claims over original patent
110	18	210	09	**Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) \$0.00

FEE CALCULATION (continued)**3. ADDITIONAL FEES**

Large Entity Code	Small Entity Code	Fee Description	Fee Paid		
105	130	205	65	Surcharge - late filing fee or oath	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet	
139	130	139	130	Non-English specification	
147	2520	147	2520	For filing a request for reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
113	1840*	113	1840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	400	216	200	Extension for reply within second month	
117	920	217	460	Extension for reply within third month	
118	1440	218	720	Extension for reply within fourth month	
119	320	219	160	Notice of Appeal	
120	320	220	160	Filing a brief in support of an appeal	
121	280	221	140	Request for oral hearing	
138	1510	138	1510	Pet. to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1280	241	640	Petition to revive - unintentional	
142	1280	242	640	Utility issue fee (or reissue)	
143	460	243	230	Design issue fee	
144	620	244	310	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	50	123	50	Petitions related to provisional applications	
126	180	126	180	Submission of Information Disclosure Statement	
581	40	581	40	Recording each patent assignment per property (times number of properties)	
146	740	246	370	Filing a submission after final rejection (37 CFR 1.129(a))	
149	740	249	370	For each additional invention to be examined (37 CFR 1.129(b))	
Other fee (specify)					
Other fee (specify)					

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) \$ 0.00

SUBMITTED BY

Name	Douglas B. Barrow	Registration No.	28582	Telephone	612-623-6769
Signature				Date	September 20, 2002

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SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket Number: 1299US

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Citizenship: All United States of America

Title of Invention: Self Contained Lubricant Dispenser

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SELF CONTAINED LUBRICANT DISPENSER**RELATED APPLICATIONS**

This application is a _____ of US Application serial number _____, filed _

5 _____.

BACKGROUND OF THE INVENTION

While larger vehicle maintenance and service facilities have a number of options for automated metered dispensing of fluids, smaller facilities performing relatively few daily oil changes (e.g. 5) have less choice. In such applications, lubricants may be dispensed by (1) pouring from quart/liter containers; (2) hand pumping from a bulk container; or (3) filling a bucket or other container with the desired quantity of lubricant and then pouring from that container into the vehicle.

15

SUMMARY OF THE INVENTION

It is therefore an object of this invention to provide a portable integrated oil dispensing unit primarily for use in auto repair shops and low volume service stations where low volume, infrequent fluid dispense is desired.

Towards this end, the integrated design incorporates a dispense valve, a meter, a hose, an AC powered electric pump, power cord and adjustable fluid suction tube, all packaged in one portable unit.. The unit is capable of dispensing fluids such as standard SAE grade automotive motor oils, automatic transmission fluid, gear lube, hydraulic oil and engine coolant (antifreeze) The pump motor will shut down at completion of dispense; and emergency shut-off to be provided

These and other objects and advantages of the invention will appear more fully from the following description made in conjunction with the accompanying drawings wherein like reference characters refer to the same or similar parts throughout the several views.

A BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a schematic view of the lubricant dispenser of the instant invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The instant invention, generally designated 10, is comprised of a flow meter 1 in conjunction with a pump 2. In the preferred embodiment, these two elements are combined wherein pump 2 is of the gerotor type and the flow meter 2 is formed by locating a Hall Effect sensor in the gerotor housing so as to count the pulses generated by movement of the gerotor teeth due to flow therethrough. A DC motor 3 drives pump 2 through a gearbox 12 to reduce the rpm level. Dispenser 10 is designed for mounting on a

bulk fluid container 4 and has a suction tube 5 depending downwardly into container 4. A portable base 6 may be provided. Dispensing hose 7 leads to dispense valve 8 which has a display 8a thereon to indicate the amount dispensed. A hose reel 11 or hose rack (for winding up hose) is desirably incorporated into the unit 10. Flow meter 1 transmits
5 volume dispense information to display 8a either via a wireless link or through one or more wires incorporated into hose 7.

For operation, all the operator need do is insert suction tube 5 into container 4 and place unit 10 on top of container 4. After plugging in the unit, it is ready to dispense. The unit first has to be primed, that is, by opening the dispense valve 8 until fluid flows from
10 valve 8. At that point, flow meter 1 will read the amount dispensed. The flow meter/display combination and associated control electronics are also capable of performing preset dispense, that is, a desired amount (e.g. 5 quarts) is designated by the operator and the unit ceases dispensing when that amount has been dispensed.

It is contemplated that various changes and modifications may be made to the
15 lubricant dispenser without departing from the spirit and scope of the invention as defined by the following claims.

WHAT IS CLAIMED IS:

1. A dispenser for dispensing lubricants and the like from a bulk container, said dispenser comprising:
 - a motor;
 - 5 a pump driven by said motor;
 - a flow meter incorporated into said pump;
 - a suction tube depending into said bulk container from said pump;
 - a dispense valve; and
 - a dispense hose connecting said pump and said dispense valve.
- 10 2. The dispenser of claim 1 further comprising a display on said dispense valve for the amount of fluid dispensed, said display being in communication with said flow meter.
3. The dispenser of claim 1 further comprising a hose storage device..
4. The dispenser of claim 3 wherein said hose storage device is a hose reel.

ABSTRACT

An integrated design for dispensing lubricants and similar fluids from bulk containers incorporates a dispense valve, a meter, a hose, a DC powered electric pump, power cord and adjustable fluid suction tube, all packaged in one portable unit.. The unit
5 is capable of dispensing fluids such as standard SAE grade automotive motor oils, automatic transmission fluid, gear lube, hydraulic oil and engine coolant (antifreeze) The pump motor will shut down at completion of dispense; and emergency shut-off to be provided.

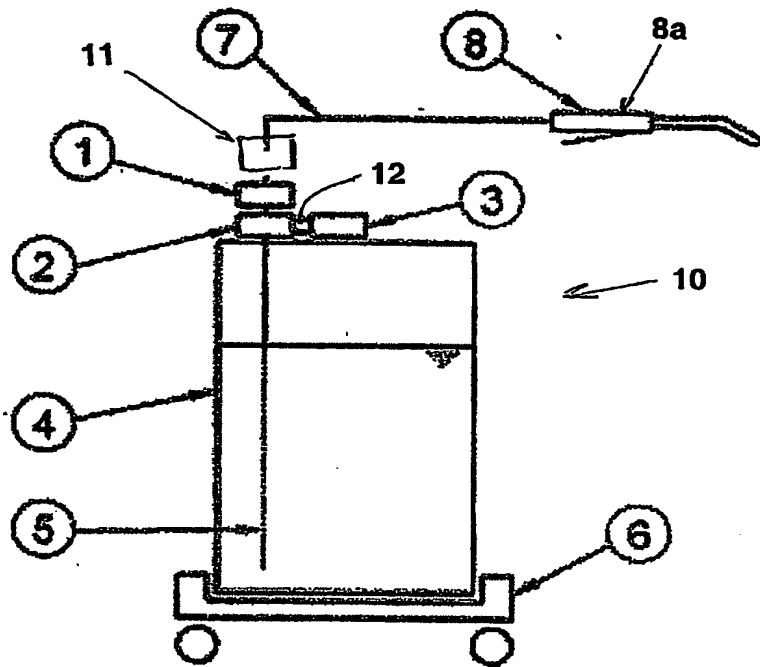


Figure 1

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